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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,220	01/28/2004	Yoshihiko Uchida	Q79569	7643

23373 7590 09/27/2005

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EXAMINER	
HUYNH, ANDY	

ART UNIT	PAPER NUMBER
2818	

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,220	UCHIDA ET AL.	
	Examiner	Art Unit	
	Andy Huynh	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *9-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to the Amendment dated September 13, 2005.

In the Amendment, the title, Claims **1 and 9** are amended. However, Claims **9-14** have been withdrawn from consideration as being drawn to a non-elected invention in the Office Action of June 14, 2005.

Since Applicant has received an action on the merits for originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, Claims **9-14** are withdrawn from consideration as being drawn to a non-elected invention. See 37 CFR 35 § 1.142(b) and MPEP § 821.03.

Response to Arguments

Applicant's arguments with respect to Claims **1-8** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **1 and 5** are rejected under 35 U.S.C. 102(b) as being anticipated by Song et al. (USP 5,532,853 hereinafter referred to as "Song").

Song discloses in Fig. 12 and the corresponding texts as set forth in column 6, lines 11-55, an organic semiconductor element, comprising:

an organic semiconductor layer 404 as a current channel;

a gate insulation layer 402 consisting of an insulating material of an organic compound;

a gate electrode 301D consisting of a metal aluminum and opposing to said semiconductor layer so that said gate insulation layer is interposed between said gate electrode and said semiconductor layer;

a source electrode 303 and a drain electrode 302A electrically connected in the vicinity of the two ends of the organic semiconductor layer respectively; and

a gate oxide film 401 consisting of a metal oxide obtained by oxidizing a gate electrode material between said gate electrode and said gate insulation layer (col. 6, lines 18-20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims **2-4, 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (USP 5,532,853 hereinafter referred to as "Song").

Regarding Claims **2-4**, Song disclose all the above claimed limitations except for the gate insulation layer is formed from a resin that is soluble in an organic solvent; the gate insulation

layer is formed from a resin that is obtained from a monomer or oligomer that is soluble in an organic solvent; and the gate oxide film is formed by means of anode oxidation. However, the limitations "the gate insulation layer is formed from a resin that is soluble in an organic solvent; the gate insulation layer is formed from a resin that is obtained from a monomer or oligomer that is soluble in an organic solvent; and the gate oxide film is formed by means of anode oxidation" are taken to be a product by process limitation and consider non-limitation. In a product-by-process claim, it is the patentability of the claimed product and not of the recited process steps which must be established. Therefore, when the prior art discloses a product which reasonably appears to be identical with or only slightly different than the product claimed in a product-by process claim, a rejection based on sections 102 or 103 is fair. The Patent Office is not equipped to manufacture products by a myriad of processes put before it and then obtain prior art product and make physical comparisons therewith. In re Brown, 173 USPQ 685 (CCPA 1972). Also, a product by process claim directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ I S at 17 (footnote 3). See In re Fessman, 180 USPQ 324, 326 (CCPA 1974); In re Marosi et al., 218 USPQ 289, 292 (Fed. Cir. 1983); and particularly In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process steps, which must be determined in a " product by process" claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old and obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not.

Regarding Claims **6 and 7**, Song discloses all the above claimed limitations except for the organic semiconductor layer consists of a low/high molecular organic compound. It would

have been obvious to one having ordinary skill in the art at the time of the invention was made to form the organic semiconductor layer consists of a low/high molecular organic compound, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim **8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (USP 5,532,853 hereinafter referred to as "Song") in view of the Related Art.

Song discloses all the above claimed limitations except for the organic semiconductor element further comprises an intermediate layer consisting of an inorganic material between said gate oxide film and said gate insulation layer. However, an intermediate layer containing an inorganic compound may be provided between the gate oxide film and the gate insulation layer as set forth at page 7 lines 19-21 in the specification. It would have been an obvious matter of design choice to form an intermediate layer containing an inorganic compound between the gate oxide film and the gate insulation layer, since applicant has not disclosed that the intermediate layer containing the inorganic compound solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well without the intermediate layer.

Conclusion

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy Huynh whose telephone number is (571) 272-1781. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ah

09/23/05

Andy Huynh

Patent Examiner